

REMARKS

Applicant has carefully considered the Office Action, and respectfully submits that the subject application is now in condition for allowance based upon the amendments presented herein and the following remarks.

Status of Claims

The subject application was originally filed with 29 claims. In a Preliminary Amendment dated December 13, 2005, Applicant cancelled claims 1-29 and added new claims 30-58. In a prior Amendment, Applicant cancelled claims 33 and 47. In a second prior Amendment, Applicant amended claims 30, 42, and 56. In this Amendment, Applicant has amended claims 30, 36, 42, 51, and 56. Upon entry of this Amendment, claims 30-32, 34-46, and 48-58 will be pending in the subject application.

Summary of Office Action

In the Office Action dated October 6, 2008, the Examiner:

- 1) rejected claims 30-32, 34, 35, 37-40, 42-44, 46, 48-50, 52, and 55-57 under 35 U.S.C. § 103(a) as being unpatentable over GB 2,265,959 issued to Pardy (“Pardy”) in view of U.S. Patent No. 7,222,644 issued to Pianetto et al. (“Pianetto”);
- 2) rejected claims 36 and 51 under 35 U.S.C. § 103(a) as being unpatentable over Pardy in view Pianetto and further in view of U.S. Patent No. 5,746,255 issued to Walsh et al. (“Walsh”); and
- 3) rejected claims 34, 41, 45, 48, 53, and 58 under 35 U.S.C. § 103(a) as being unpatentable over Pardy in view of Pianetto and further in view of U.S. Patent No. 6,176,147 issued to Ozeki (“Ozeki”).

35 U.S.C. § 103(a) Rejection of Claims 30-32, 34, 35, 37-40, 42-44, 46, 48-50 and 55-57 Based on Pardy in View of Pianetto

As discussed above, claims 30-32, 34, 35, 37-40, 42-44, 46, 48-50, 52, and 55-57 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Pardy in view of Pianetto. For at least the following reasons, Applicant traverses this rejection.

Independent claims 30, 42, and 56, as amended, each recite “an elongate flexible damping hose” having a peripheral wall that “deforms under the impulsive or vibrational

pressure disturbances towards, but not reaching a circular cross section.” (Emphasis added.) Claims 30, 42, and 56 further recite that “the hose has a wall construction including interwoven strands configured to be displaced relative to each other during deformation of the cross-sectional shape of the hose and to absorb deformation energy as frictional loss between the strands.” The Office asserts that Pardy teaches an elongate flexible damping hose having walls that deform in response to impulsive or vibrational pressure disturbances. (Office Action, p. 2.) However, Pardy is silent on any form of wall construction. Indeed, the fuel tube 32a, b, c is exemplified as being an extruded plastics material tube such as nylon for example (see page 4, line 5). On page 3 of the Office Action, the Office acknowledges that Pardy does not disclose a wall construction of interwoven strands and instead relies on Pianetto to supply this teaching.

However, Pianetto fails to cure this defect for several reasons. First, Pianetto teaches away from “an elongate flexible damping hose” having a peripheral wall that “deforms under the impulsive or vibrational pressure disturbances towards, but not reaching a circular cross section.” Instead, Pianetto is directed to a high-pressure hose and pressure washer. As such, its specification describes a device designed to accommodate spikes in pressure from 0 psi (the off position) to “at least about 12,000 psi.” (Col. 2, lines 25-30.) To operate effectively, the pressure washer of Pianetto must deliver high-pressure fluid to clean surfaces—not dampen pressure spikes. In fact, in the Objects and Summary of the Invention, Pianetto states, “[i]t is a general object of the invention to provide a high-pressure thermoplastic hose that is capable of attaining high operating pressure, yet that remains flexible.” (Col. 2, lines 14-16.) It would be contrary to this object to provide a damping hose that reduces pressure. Moreover, Pianetto expressly teaches away from a damping hose that deforms under impulsive or vibrational pressure disturbances in the Detailed Description of the Preferred Embodiments, stating, “the hose of the invention is substantially non-deforming, such that the dimensions of the hose do not change when the pressure washer is operated at its rated pressure.” (Col. 6, lines 15-18.) Piannetto achieves this, in part, with the use of a reinforcing sheath 16 of interwoven strands having a high-tensile strength.

Likewise, Pardy teaches away from a combination with Piannetto. Pardy is directed to a fuel pipe that deforms to absorb energy. (Abstract.) There is no suggestion in Pardy that the fuel tube 32 should be encased in anything other than the resilient rubber-like sheath 34 or be left as a plain extruded plastics tube with no further reinforcement at all as is described in that reference.

In fact, if the high-tensile strength strands of Pianetto were employed with the fuel pipe of Pardy, rendering it “substantially non-deforming,” Pardy would become non-functional.

MPEP § 2145 states that “it is improper to combine references where the references teach away from their combination.” (Citing In re Grasselli, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)). Further, a “prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” (MPEP § 2142.02 (citing W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983))). In the present case, Pardy and Pianetto as a whole teach away from their combination. Pianetto, in particular, by describing a high-pressure washer that is substantially non-deforming, leads away from the claimed invention. For at least this reason, the obviousness rejection based on the combination of Pardy and Pianetto should be withdrawn.

Additionally, the independent claims recite that “the hose has a wall construction including interwoven strands configured to be displaced relative to each other during deformation of the cross-sectional shape of the hose and to absorb deformation energy as frictional loss between the strands.” Pianetto fails to disclose this element, but instead discloses a braided sheath 16 that is adhesively secured to the core 15. (Col. 4, lines 24 to 27; column 4, lines 66 to column 5, line 6). Pianetto further states that “the adhesive may be included in any amount sufficient to impart adhesion between the core and sheath, preferably an adhesive strength sufficient to prevent separation of the core from the sheath when the hose is bent.” (Col. 5, lines 3-6.) Consequently, it is fully intended that the sheath 16 which is impregnated with adhesive remains adhesively bonded to the core 15. Thus, any relative displacement of the interwoven strands relative to each other during deformation would result in the metallic fibrous strands of the jacket 16 breaking the adhesive bonding them in place and which would be completely contrary to the intention of Pianetto et al.

Further, Pianetto discloses a circular cross-section perpendicular to the axis of the hose so that any change in cross-sectional area can only be accommodated by circumferential stretching of the hose in the way that the present invention seeks to avoid. The Office asserts that Pianetto discloses “a hose having a wall of a substantially fixed length in the cross-sectional plane.” However, even assuming *arguendo* that this is true, the cross-sectional plane is not a non-circular cross-sectional plane as recited by the claims.

For at least the foregoing reasons, the 35 U.S.C. § 103(a) rejection to claims 30, 42, and 56, and the claims that depend either directly or indirectly therefrom (i.e., claims 31-32, 34, 35, 37-40, 43-44, 46, 48-50, 52, 55, and 57, is unsupported and should be withdrawn.

35 U.S.C. § 103(a) Rejection of Claims 36 and 51 Based on Pardy in View of Pianetto and Further in View of Walsh

As discussed above, claims 36 and 51 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Pardy in view of Pianetto in further view of Walsh. For at least the following reasons, Applicant traverses this rejection.

Since claim 36 depends directly from independent claim 30 and incorporates by reference all of the elements from this claim, the combination of Pardy, Pianetto, and Walsh fails to disclose or suggest each and every element recited by claim 36 for the same reasons as discussed above with respect to independent claims 30 in view of Pardy and Pianetto. Since claim 51 depends indirectly from independent claim 42 and incorporates by reference all of the elements from this claim, the combination of Pardy, Pianetto, and Walsh fails to disclose or suggest each and every element recited by claim 51 for the same reasons as discussed above with respect to independent claims 42 in view of Pardy and Pianetto.

For at least these reasons, the 35 U.S.C. § 103(a) rejection with respect to claims 36 and 51 are unsupported and should be withdrawn.

Further, claims 36 and 51 each recite that “in the absence of fluid pressure the first wall parts are arranged to contact each other.” The Office acknowledges that neither Pardy nor Pianetto teach this element, and instead relies on Walsh to provide this teaching. However, claims 36 and 51 have each been amended to recite that “fluid passageways remain adjacent the second wall parts” in the absence of fluid pressure. Walsh fails to disclose this element. Instead, Walsh is directed to a frost-free water pipeline supply system (see column 1, lines 4 to 7). The purpose of the hose of Walsh is to provide a water hose which is automatically self-dewatering for use where the possibility of freeze-up may exist (see column 2, lines 31 to 34). The hose of Walsh essentially comprises a hose within a hose; one inner hose carrying water and which expands to compress air filled pockets 26 within an outer hose. Once the hose has finished carrying water, the compressed air in the pockets 26 service to flatten the inner hose 24 of Fig. 1 and expel water therefrom so there is no risk of damage to the hose during freezing weather

conditions. The disclosed embodiments in Walsh fail to disclose fluid passageways that remain adjacent the second wall parts in the absence of fluid pressure.

For at least this additional reason, the 35 U.S.C. § 103(a) rejection with respect to claims 36 and 51 are unsupported and should be withdrawn.

35 U.S.C. § 103(a) Rejection of Claims 34, 41, 45, 48, 53 and 58 Based on Pardy in View of Pianetto and Further in View of Ozeki

As discussed above, claims 34, 41, 45, 48, 53 and 58 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Pardy in view of Pianetto and further in view of Ozeki. For at least the following reasons, Applicant traverses this rejection.

Since claims 34 and 41 depend directly from independent claim 30 and incorporate by reference all of the elements from this claim, the combination of Pardy, Pianetto, and Ozeki fails to disclose or suggest each and every element recited by claims 36 for the same reasons as discussed above with respect to independent claims 30 in view of Pardy and Pianetto. Since claims 45, 48, and 53 depend directly from independent claim 42 and incorporate by reference all of the elements from this claim, the combination of Pardy, Pianetto, and Ozeki fails to disclose or suggest each and every element recited by claim 51 for the same reasons as discussed above with respect to independent claims 42 in view of Pardy and Pianetto. Since claim 58 depends directly from independent claim 56 and incorporates by reference all of the elements from this claim, the combination of Pardy, Pianetto, and Ozeki fails to disclose or suggest each and every element recited by claim 51 for the same reasons as discussed above with respect to independent claims 42 in view of Pardy and Pianetto.

For at least these reasons, the 35 U.S.C. § 103(a) rejection with respect to claims 34, 41, 45, 48, 53, and 58 are unsupported and should be withdrawn.

Moreover, claims 34 and 48 relate to the flexible damping hose of the present invention having a fixed peripheral wall length (in cross-section) over a predetermined length of hose. It does not seem that Ozeki contributes any additional teaching in this regard, and the Office Action does not address this element. For at least this additional reason, the 35 U.S.C. § 103(a) rejection with respect to claims 34 and 48 are unsupported and should be withdrawn.

Additionally, claims 41, 45 and 58 relate to the flexible damping hose of the present invention being mounted on the actuator. The Office specifically refers to the hose 54 which delivers hydraulic fluid and is disposed along a rack casing 22 (these being shown in Fig. 5 of Ozeki). However, as recited in the independent claims, the hose is a flexible damping hose largely comprising non-metallic materials in at least the hydraulic fluid carrying part thereof. In claims 41, 45, and 48, the damping hose is attached as a separate entity to a steering rack. In Ozeki, the pipe 54 is presumably a metal pipe since as column 3, lines 40 to 43 point out, the pipe 54 is "incorporated integratedly by a casting" (into the steering rack 22). Therefore, the pipe 54 of Ozeki is metal and cannot operate as a hydraulic damping hose.

For at least this additional reason, the 35 U.S.C. § 103(a) rejection with respect to claims 41, 45 and 58 are unsupported and should be withdrawn.

Conclusion

In view of the remarks above and the amendments presented herein, it is believed that claims 30-32, 34-46, and 48-58 are in condition for allowance and notice to such effect is respectfully requested. If the Examiner thinks a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned at the phone number provided below.

If any fees are due in connection with this Amendment, the Commissioner is authorized to charge Deposit Account No. 02-2051, specifically identifying Docket No. 29390-1.

Respectfully submitted,

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By: /Bryan J. Jaketic/ _____
Bryan J. Jaketic
Reg. No. 56,280

BENESCH, FRIEDLANDER,
COPLAN & ARONOFF LLP
200 Public Square
Suite 2300
Cleveland, OH 44114
(216) 363-4478
Attorney for Applicant